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Pre-flood hazard mitigation plan for the



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re-Flood Hazard Mitigation Plan

for the

City of Kalispell

and Flathead County

Montana

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September 2, 1983

Prepared by the

Department of Natural Resources and Conservation

Floodplain Management Section

In Cooperation with the

City of Kalispell

and Flathead County

INTRODUCTION

Purpose

The purposes of this Pre-Flood Hazard Mitigation Plan are:

- a. to identify general flood hazards in the community,
- b. to describe existing efforts to reduce flood damages in identified areas,
- c. to guide and encourage local community officials in taking further action as may be reasonably expected to enhance mitigation efforts,
- d. to identify and support applications for financial assistance to implement ideas and suggestions consistent with community objectives which will reduce flood damages.

Scope

This plan identifies opportunities to reduce future damages from the flooding sources identified, in the Kalispell and Flathead County Flood Insurance Studies produced by the Federal Emergency Management Agency. The plan takes a comprehensive look at what has already been done to reduce flood damages and develops suggestions of action that can be taken to reduce the physical and monetary effects of future floods.

Funding

The funding source for the plan was provided under the State Assistance Program (SAP) grant administered by the Federal Emergency Management Agency (FEMA). The SAP grant allows the Floodplain Management Section of the Department of Natural Resources and Conservation (DNRC) to assist with local community efforts in reducing future flood damage losses.

Authority

Authority for the City of Kalispell and Flathead County to guide future development in flood-prone areas is provided by:

City Ordinance Number: 962

County Resolution Number: 204 and 205 (expected to convert Regular Phase soon)

The Montana Floodplain and Floodway Management Act (MCA 76-5)

The National Flood Insurance Act of 1968

The Flood Disaster Protection Act of 1973

Definitions

The following definitions are offered as a guide toward better understanding the similarities between the concepts discussed in this plan.

Hazard Mitigation - A plan "to alleviate by softening and making less severe the effects of a major disaster or emergency and of future disaster in the affected areas, including reduction or avoidance. Hazard mitigation can reduce the severity of the effects of the flood emergency on people and property by reducing the cause or occurrence of the hazard; reducing exposure to the hazard; or reducing the effects through preparedness, response and recovery measures. Hazard mitigation is a management strategy in which current actions and expenditures to reduce the occurrence or severity of potential flood disasters are balanced with potential losses from future floods."

Floodplain Management - A comprehensive approach "to reduce the damaging effects of floods, preserve and enhance natural values and provide for optimal use of land and water resources within the floodplain. Its goal is to strike a balance between the values obtainable from the use of floodplains and the potential losses to individuals and society arising from such use."

Emergency Preparedness - A process to "reduce the vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural or man-made catastrophes."

Flood - "A general and temporary condition of partial or complete inundation of normally dry land areas from (a) the overflow of streams, rivers, or other inland water bodies, or (b) the unusual and rapid accumulations or runoff of surface waters from any source."

Identification of Flood Problem

There are minimal flood protection works within the detailed study reaches of the Flood Insurance Studies. Whitefish Lake provides flood storage and some flood regulation for the Whitefish River.

There are significant dams and reservoirs that affect Flathead River valley flooding. These are the Hungry Horse Dam on the South Fork Flathead River and the Kerr Dam and the Flathead Lake on the Flathead River.

There are two major dikes along the west bank of the Flathead River near Kalispell.

The Stillwater River has several small lakes which are capable of providing some flood detention in the upper reaches of the watershed. Just north of Kalispell, there is a dike running along the left bank (looking downstream) of the Stillwater River near the golf course. Minor flood protection features intended to reduce overbank flooding and bank stabilization are also present.

The City of Kalispell is in the Regular Phase and Flathead County is in the Emergency Phase (expected to convert to the Regular Phase soon) of the National Flood Insurance Program (NFIP) and are enforcing flood damage reduction regulations.

Emergency Preparedness

The Flathead County emergency response plan has been in place since 1975. It identifies three major disasters that could occur in this area: aircraft crash, flooding, and hazardous materials spills. A warning program is also included.

The flood plan contains five procedural steps in its plan of action. Step 1 is detection, using available information sources to determine flood risk. Step 2 is warning, using available news distribution services. Step 3 is priorities, identifying what services will be used for accomplishing the action. Step 4 is personal services, identifying responsibility areas for public services. Step 5 is Phase II procedure of warning, restricting travel in the Evergreen area if flooding crosses LaSalle Road.

Recommended Mitigation Measures

These recommendations have been developed with assistance from local community officials. They are not required actions. Rather, it is strongly suggested that when achievable, these recommendations be implemented.

Long Term Mitigation Solutions

- a. Increase the public's awareness of flood hazards and correct construction practices. Elevate their knowledge of the flood-prone areas and describe techniques to reduce flood damages to existing structures. Reinforce the purchase of federal flood insurance as a way of reducing the economic impact of a flood disaster.
- b. Regorously enforce flood damage reduction regulations for new construction and substantial improvements in flood-prone areas identified on the Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps developed by FEMA.

Specific Areas of Concern

City of Kalispell

NFIP Community Number :300025

FIRM Panel Number: 0005B

Effective Date: September 17, 1980

Existing Mitigation

-Existing flood damage reduction regulations are being enforced.

-Hungry Horse Dam on the South Fork Flathead River upstream of Kalispell.

Areas of Concern

These areas were identified by the community officials:

-Mobile home subdivision access road on Ashley Creek near South Meadows

-Investigate purchase of floodplain property by the City and convert into park near the Stillwater River in the northeast corner of the city

-Gateway West Mall and Theaters north of U.S. Highway 2,
west of Meridian Road near West Spring Creek

-Buttrey's Food Store on the south side of U.S. Highway 2,
east of Meridian Road

Recommended Mitigation Measures

1. Mobile home subdivision access road on Ashley Creek

The mobile home subdivision is located out of the 100-year floodplain. The access road will cross Ashley Creek at two locations.

- a. Ensure that the bridges meet the City's flood damage reduction regulations and pass the 100-year flood flow.
- b. Determine alternate routes that do not cross Ashley Creek in case the bridges become inundated or destroyed by a flood greater than a 100-year frequency or other circumstances, such as debris build-up.

2. Investigate Purchases of Floodplain Property by the City to Convert into a park (Lawrence Park).

The City presently owns a considerable amount of the property in the area, and is beginning to look at ideas of developing the property into a park.

- a. Any structural development should be constructed in compliance with the City's flood damage reduction regulations. Some of the area is within the floodway. No new structures should be located in this area.
- b. It is a progressive and useful plan to use floodplain property for recreational purposes. The use of permanent fences should be restricted so that debris cannot accumulate on them backing up or diverting flood water to areas not normally affected.

3. Gateway West Mall and Theaters

Both of these structures are located near Spring Creek. The Theater would appear to receive flooding directly from Spring Creek and the Mall would receive a combination of flood water and accumulated runoff from the parking lot.

~~The Twin Theaters lobby floor is at the 2962.5 M.S.L.~~
elevation. The 100-year flood elevation is 2963 M.S.L. for that area, resulting in .5 feet of flooding.

The Gateway West Mall west entrance is at the 2962.25 M.S.L. elevation. The parking lot between the theater and the mall is lower.

- a. Recommended to Tom Hines - Manager of the Theater - that the amount of sandbags needed to adequately protect the exterior doors of the theater be determined and purchase the amount to be stored for use at the Theater.

Kim Potter, DES Director, will assist Mr. Hines in determining the amount needed and where to purchase the bags.

- b. Recommended to Ryan Heinz, Manager of the Mall, that the amount of sandbags needed to adequately protect the exterior entrance doors of the mall be determined and purchase the amount to be stored for use at the Mall.

Kim Potter will also assist Mr. Heinz.

- c. Both managers were encouraged to purchase federal flood insurance to protect against financial lossess.

The floodplain maps (FIRM) of this area show that U.S. Highway 2 would be inundated by the 100-year flood. According to elevations obtained from the Twin Theaters plans, the highway is at an elevation of 2963 M.S.L. in this area. Possibly work has been conducted on the highway since the maps were developed.

4. Buttrey's Food Store

The Buttrey's Food Store is located a considerable distance from the West Spring Creek waterway, but due to its relatively low ground location, it receives water caused by the creek flooding and runoff. The floor level of the store would be susceptible to approximately one (1) foot of flood water.

- a. Recommended to Chuck Hagen, Manager of the store, that the amount of sandbags needed to adequately protect the exterior entrance doors be determined and purchase the amount to be stored for use at the store.

It was also discussed that merchandise contained in plastic bags (i.e. 50 lbs softener salt) could also be used with or in place of sandbags if an adequate number is available.

Kim Potter will also assist Mr. Hagen.

5. Existing Structures in the Floodplain

An observation was made that many structures (residential, commercial, mobile homes) were placed in the floodplain before the floodplain management program was developed.

- a. Residential structures located in the floodplain area are encouraged to have federal flood insurance purchased by the owners to protect against the financial losses due to flooding.
- b. Determine the number of sandbags needed to adequately protect the home from the 100-year flood by determining the flood elevation and the area to be protected and purchase the amount to be stored and used at the homesite.
- c. If the cost-benefit is worthwhile, the home could be lifted off its present foundation and fill used to elevate the ground level to be in compliance with the City's flood damage reduction regulations.
- d. Commercial structures located in the floodplain are encouraged to do the same actions as residential structures. One difference is water tight seals can be made available to protect exterior openings to the 100-year flood elevation instead of elevating the structure.

- e. Mobile homes should be encouraged to tie down the trailer to prevent floatation. Elevate the trailer site to bring it in compliance with the City's flood damage reduction regulations. If the trailer is located in the floodway, it should be encouraged that it be moved to a safer, less vulnerable location. Replacement units should not be allowed to return in floodway areas.

Specific Areas of Concern

Flathead County

NFIP Community Number : 300023B

FIRM Panel Number: (preliminary) 0001-3425

Effective Date:

Existing Mitigation

- Flood damage reduction regulations are being enforced by the County.
- Whitefish Lake provides flood storage and some flow regulation for the Whitefish River.
- Hungry Horse Dam on the South Fork Flathead River.
- Kerr Dam and Flathead Lake on the Flathead River.

-Two dikes on the west bank of the Flathead River near Kalispell.

Areas of Concern

These areas were identified by the community officials:

-Spruce Park Mobile Home Park on north side of U.S. Highway 2, west of Flathead River, panel 1830 northwest corner of Section 2 and Meadow Manner on Shady lane, panel 1810 northeast corner Section 9

-Kootenai Bend Subdivision southwest of Columbia Falls, panel 1430, northcentral Section 19

-Columbia Falls Wastewater Treatment Plant southwest of Columbia Falls, panel 1430, southcentral Section 18

-Lazy Bay of Whitefish Lake, panel 1060, southcentral Section 5

Recommended Mitigation Measures

These recommendations have been developed as guidance for the local community officials. They are not required actions. Rather, it is strongly suggested that when achievable, these recommendations be implemented.

Long Term Mitigation Solutions

- a. Increase the public's awareness of flood hazards and correct construction practices. Elevate their knowledge of the flood-prone areas and describe techniques to reduce flood damages to existing structures. Reinforce the purchase of federal flood insurance as a way of reducing the economic impact of a flood disaster.
- b. Continue to enforce the flood damage reduction regulations for new construction and substantial improvements in flood-prone areas identified on the Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps developed by FEMA, soon to be finalized and expected to be accepted by the County.

Recommended Mitigation Measures

1. Spruce Park Mobile Home Park and Meadow Manner

These parks have received severe flooding during the 1964 and 1975 flood on the Flathead River. It is estimated that at least 50 percent of Spruce Park is in the floodway.

- a. It is recommended that the Spruce Park owner not be allowed to expand the mobile home park into the floodway area.
- b. Any new mobile homes placed in the flood fringe of Spruce Park and Meadow Manner areas must be in compliance with the County's flood damage reduction regulations (tie down, elevate, floodproof utilities).

2. Kootenai Bend Subdivision

- a. The initial subdivision was approved before the floodplain management regulations were adopted. If the subdivision expands, ensure that any expansion is not in the floodway and that it meets the County's flood damage reduction regulations if in the flood fringe.
 - b. Existing structures are encouraged to purchase federal flood insurance to cover any flood damage losses.
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- c. Sandbags are encouraged to be purchased and stored at the subdivision for use by the residents.
- d. Homes in the floodplain can be lifted off its foundation and fill placed to bring the floor elevation in compliance with the County's flood damage reduction regulations.

3. Columbia Falls Wastewater Treatment Plant

The location of the plant is out of the floodplain and apparently safe from flooding.

4. Lazy Bay of Whitefish Lake

Developers are attempting to develop on the island which is susceptible to flooding. The County Sanitarian so far has discouraged the development.

- a. The island would be in the floodway if one was developed for that area (part is shown as floodway). No structure should be allowed on the island for safety and health reasons.

General Observation

The City of Whitefish does not appear to be enforcing its flood damage reduction regulations. Many new structures appear to be placed in the floodplain without taking flooding into consideration. The City should enforce its floodplain regulations to reduce the susceptibility to any new development to flooding. Federal flood damage assistance is now on a 75 percent federal, 25 percent state and local match. The less damage the City receives, the less it will pay towards damage assistance.

The City of Columbia Falls appears to be enforcing its flood damage reduction regulations.

